Written Statement of Cathryn Stephens, A.A.E., Airport Director, Eugene Airport
On Behalf of the American Association of Airport Executives
Before the House Committee on Transportation and Infrastructure Subcommittee on Aviation
Finding the Right Frequency: 5G Deployment & Aviation Safety
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Chair DeFazio, Ranking Member Graves, Chair Larsen, Ranking Member Graves, and members of the subcommittee, thank you for the opportunity to appear before you today to highlight airport industry concerns and the perspective of an individual airport operator on the effects of 5G C-Band deployment on the nation's aviation system.

My name is Cathryn Stephens, and I am the Airport Director for the Eugene Airport (EUG) in Eugene, Oregon. I am testifying today on behalf of the American Association of Airport Executives (AAAE), where I serve on the Board of Directors. AAAE is the world's largest professional organization representing individuals who manage and operate more than 850 public-use commercial and general aviation airports across the country.

As you have clearly recognized in putting together today's hearing, getting it "right" when it comes to the continued rollout of 5G and other critical telecommunication services in the months and years ahead is imperative for the continued safe and efficient operation of the nation's highly interdependent aviation system. The fact that you have gathered witnesses representing airports, mainline carriers, regional carriers, manufacturers, helicopter operators, and pilots speaks to the importance of this issue across the aviation industry.

As has been widely reported, progress has been made in recent weeks to mitigate the immediate impacts of the 5G C-Band rollout on the aviation system and to prevent potential interference with aircraft operations that could have resulted in a significant safety hazard. The voluntary action taken by Verizon and AT&T on January 18 in advance of the January 19 rollout and the subsequent work by the Federal Aviation Administration to clear a large percentage of the U.S. commercial aircraft fleet to conduct low-visibility operations into affected airports are notable.

Still, questions and concerns remain about what the days, weeks, months, and years ahead will mean as the situation evolves and as the deployment of 5G continues in communities across the country. Already, some airports – including Paine Field in Washington State – have seen significant flight cancellations during low-visibility events because of limitations placed on specific aircraft that routinely operate at their facilities. Other airports are seeing flight delays and diversions due to similar aircraft limitations as bad weather impacts operations at nearby airports. The list of affected airports could grow as more low-visibility events occur.

Disruptions, diversions, flight cancellations, and the grounding of aircraft during low-visibility events – all of which hang over our industry and our passengers as a real possibility as the 5G C-Band rollout continues – aren't just an inconvenience, they ripple across the country and the globe quickly with significant, negative impacts on passengers, airports, communities, businesses, our supply chain, and the economy.

While we are grateful for the measures that have been put in place to partially address immediate concerns – and commend AT&T and Verizon for their voluntary actions to date – we need to be clear: the temporary and partial fixes that have been in place to this point simply aren't acceptable in the long-term. We need a <u>permanent</u> solution that acknowledges the importance of 5G services to consumers, businesses, the economy, and national security and the significant investments by telecommunications

providers while also addressing the critical need for our nation's aviation system to function 24 hours a day, 365 days a year, in low-visibility conditions.

We also need better communication from our federal partners and additional data and information sharing, transparency, and aviation industry involvement to understand exactly where we are with 5G deployment and where we are headed.

It's incredibly frustrating to me and my airport colleagues, for example, to not have insight into the location of 5G towers that could impact operations at our facilities and to lack information and certainty on what aircraft will be able to serve our airports under what circumstances in the future as 5G deployment continues. Uncertainty is a major problem in the aviation industry. Unfortunately, we find ourselves awash in uncertainty at the present time.

Airports and our aviation industry partners need more insight and involvement on the path ahead so that we can be proactive in preparing rather than reactive as we have been forced to be in recent weeks. All airports – including those not immediately impacted by the initial January 19 rollout – must prepare for and deal with potential delays, diversions, cancellations, and other impacts, but we lack the information, insight, and involvement to do so effectively. That must change moving forward.

The Eugene Perspective: Uncertainty, Questions, and Potential Operational Impacts

The challenges, frustrations, questions, uncertainty, and potential operational impacts for affected airports are readily apparent at Eugene. Despite being outside of the 46 Partial Economic Areas (PEAs) where 5G C-Band was deployed on January 19, EUG and a handful of other airports outside of the initial PEAs have been subject to Instrument Approach Procedure (IAP) Notice to Air Missions (NOTAMs), which significantly limit aircraft operations during low-visibility conditions – conditions that can be routine in our area. These NOTAMs were issued by the FAA to identify the airport IAPs affected by 5G C-Band interference and prohibited for use by the U.S. commercial fleet through an FAA airworthiness directive.

At EUG and the 87 other airports with similar IAP NOTAMS related to 5G deployment, no operations can occur in low-visibility conditions unless the FAA has granted the aircraft manufacturer an Alternative Means of Compliance (AMOC), which allows specific aircraft to fly into specific airports under specific conditions. Unfortunately, we have no insight into the conditions specified or the ability to review them as they are provided only to the manufacturer that holds the AMOC. The FAA does not make those approvals publicly available.

While it is positive that the FAA has reviewed and approved AMOCs on an expedited basis to cover at least 90 percent of the U.S. commercial aircraft fleet, we are not yet at the point where all aircraft previously serving my airport and others can continue to operate in low-visibility conditions. The continued inability for certain aircraft to operate during low-visibility conditions poses a particular problem for airports that may only receive service or that receive the vast majority of service from those aircraft.

Unfortunately, we do not know whether or when all aircraft that previously served my airport can continue to operate in low-visibility conditions now or in the future. The FAA has already acknowledged that some altimeters will have to be retrofitted or replaced based on existing data. As altimeters that are unable to function properly in a 5G C-Band environment are identified, those aircraft will presumably be taken out of service until the altimeters can be upgraded, which will cause further impact on my airport and others.

As I understand it, the recent cancellations at Paine Field offer an example of how unique and limited some of the recent fixes are. When fog rolled in and visibility became limited, one of the main aircraft serving the airport was effectively banned from operating, forcing the carrier to cancel all flights in and out of the airport. For smaller airports, including mine, where regional flights on smaller jets are common, we can't afford to simply shut down when the weather turns bad. As I mentioned previously, given the interdependent nature of the aviation system, problems at "spoke" airports aren't just a local problem, they cascade and create disruptions, hassles, and problems throughout the system.

The potential for significant disruptions is apparent at my airport. If the FAA's flight restrictions had been in place in 2021, conservatively there would have been about 90 low-visibility days impacting up to 40 percent of our flights per day. We would have projected similar disruptions this year without the issuance of the AMOCs. But with those AMOCs under monthly review and anticipating additional disruptions as the next rounds of 5G C-Band rollout, we know there will be additional disruptions if no action is taken to immediately and safely return additional regional aircraft to service.

EUG operates under low visibility conditions frequently during the winter months. For airport operations we utilize a ground control protocol, called the surface movement guidance control system or SMCGS, about 50 percent of winter days, usually lasting an average of about three hours.

During low-visibility conditions, our airline partners utilize the CAT II/CAT III Instrument Landing System (ILS CAT II/III) on the field to land with visibility down to as low as 300 feet.

Before the ILS CAT II/III system was installed 17 years ago, fog impacted air service reliability at EUG, and frequent delays and cancellations literally drove our local passengers two hours away to Portland International Airport. With the current ILS, our local passengers were finally able to stay off the freeway and fly local with confidence.

Unrestricted utilization of the ILS CAT II/III approach by the U.S. commercial fleet is critical for safe and functional commercial air service at EUG, as well as the rest of the airport system where our flights connect.

What's Next? – Questions and Recommendations

The recent positive developments related to the initial 5G C-Band deployment have been welcome news to protect the safety of the National Airspace System and avoid major disruptions to our air transportation system. However, they may be a temporary reprieve and only made possible by the good graces of AT&T and Verizon. Lingering questions must be answered, and action must be taken to ensure that the remaining underlying issues are addressed and fixed permanently. Our questions at this point, include:

- Does the FAA anticipate that <u>all</u> aircraft that were previously allowed to operate in low-visibility conditions at affected airports will eventually be able to operate again?

- If so, what is the timeline for gaining AMOCs for these aircraft?

- If not, what percentage of the fleet could be rendered inoperable under low-visibility conditions at affected airports? Will those aircraft need to have their altimeters upgraded and what kind of impact will that have on our aviation system?

- Why did the FAA issue NOTAMs and restrict some operations from occurring at some airports outside of the 46 PEAs? Were the telecommunications companies authorized to have their 5G C-Band network deployed in areas outside of the 46 PEAs?

- How long are AT&T and Verizon willing to keep the buffer zones – areas around runways where the companies agreed not to activate 5G towers – that helped limit the impacts of 5G C-Band deployment at affected airports?

- How many 5G towers exist within these buffer zones and how are these towers affecting operations at our airports?

- By what criteria is the FAA evaluating and approving AMOCs for specific aircraft to operate at specific airports under certain conditions? For example, how did the FAA determine that a buffer zone was necessary to ensure that low-visibility operations could continue at affected airports?

- How can airports – and other stakeholders that are unable to review AMOCs – easily determine what aircraft have been approved by the FAA to service what runways at what airports and under what conditions?

- If or when the telecommunication companies decide to remove or narrow the buffer zones, potentially on July 5, what airports would be impacted and how would the FAA proceed to mitigate those impacts?

- What efforts is FAA engaged in to determine if low-visibility operations could occur at affected airports within a smaller buffer zone? What is the FAA doing to mitigate the operational impact at those airports?

- How will the FAA ensure that similar operational impacts do not occur when the 5G C-Band network is deployed in the rest of the country in December 2023?

Answers to these and other questions raised by the industry along with additional transparency and data and information sharing are critical for airport operators and the aviation industry. Again, we need to be proactive in preparing for what comes next rather than reactive. In a recent letter to the FAA and FCC leadership, AAAE made the following, specific recommendations for a long-term solution:

- Creating narrowly tailored and sufficiently sized "buffer zones" around runways at <u>all affected airports</u> where the 5G C-Band will be deployed to ensure continued operations in low-visibility situations.

- Providing substantially more transparency into the scope of operational impacts that are expected to occur at individual airports to enable them to better prepare for and manage disruptions. We believe this can best be accomplished through the implementation of permanent data sharing mechanisms between the telecommunications companies, FAA, airports, and the aviation industry. To that end, we believe the establishment of a high-level working group to include airports merits serious consideration.

- Canceling, or providing substantial justification for, the IAP NOTAMs that were issued for airports that are located outside of the 46 markets where Verizon and AT&T have been authorized to deploy the 5G C-Band base stations.

In closing, I do not want to downplay the significant actions that have been undertaken in recent days by AT&T and Verizon or the FAA. What looked to be a potential crisis for 88 airports across the country, including EUG, beginning on January 19 has been averted largely, and we are learning every day of additional aircraft cleared to fly into affected airports.

Unfortunately, pockets of pain persist, and it is clear that the reprieve may be temporary and dependent on the willingness of the telecoms to operate in a limited fashion in some areas. As the situation evolves, continued vigilance is required from Congress, the FAA and DOT, the White House, telecommunication companies, and the entire aviation industry. AAAE stands ready to work with the government and our industry partners to address these critical needs.

I am grateful for the opportunity to provide the views of the airport community on how we can minimize operational impacts moving forward and appreciate your attention to this issue. Thank you for your consideration and the opportunity to testify.